

The image shows the front cover of a book. The cover is decorated with a marbled paper pattern, featuring large, irregular, dark-colored spots or 'cells' separated by a network of fine, light-colored veins. A rectangular white label is pasted onto the center of the cover. The label contains the title and other identifying information in a typewritten font. There is also some handwritten text on the left side of the label.

ORIGINAL LOG BOOK OF THE "FISH HAWK"

UNITED STATES FISH COMMISSION

*Nov. 1902* STATION NUMBERS

Numbers 7349 to 7395

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7349

Date, Dec 17<sup>th</sup> 1904

Time of day, 12:05 ; of tide,

Locality, Off Cape Sable, Fla.

Exact position, Middle Cape signal beam

east 2½ miles

Depth, 11½ ft

Nature of bottom, Smooth sand &amp; shells

Dredging instrument used, Oyster dredge

Direction of drift, S. E. ; distance, ½ mile

Temperature of air, 75 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0213 temp., 23.5

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450.

Barometer reading, 30.04

State of sky, clear

Direction of wind, N. N. W. ; force, 4

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, J. A. Smith

Boatsman, W. S. H.

Name and position of observer,

Vernon E. West.

NOTES RELATING TO STATION NO. 7349

Starfish, shells and  
one sponge

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7350

Date, Dec. 17, 1902

Time of day, 12:38 ; of tide, \* flood

Locality, Off Cape Sable, Fla.

Exact position, Lat 25° 9' 37"

Long. 81° 15' 25"

Depth, 2 1/2 fathoms

Nature of bottom, rocky coral-

Dredging instrument used, Oyster dredge

Direction of drift, S. E. ; distance, 1/2 mile

Temperature of air, 75° therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0214 temp., 23.5

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 30.04

State of sky, clear

Direction of wind, N. N. W. ; force, 4

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, James A. Smith - Boatswain, U. S. N.

Name and position of observer, Vernon C. West.

NOTES RELATING TO STATION NO. 7350

Very good sponge ground.  
Intimacy of logg. head  
sponge - shells - grass -  
star fish - a few small  
fish and small crabs.

Alpheids =

Ascidians =

4 sp fish.

3 " star fish.

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7351  
 Date, Dec 17, 1902  
 Time of day, 1:15 ; of tide, Flood  
 Locality, Off Cape Sable Fl.  
 Exact position, Lat. 25° 9' 45"  
 Long. 81° 18' 35"  
 Depth, 3 1/4 fathoms  
 Nature of bottom, Rocky coral  
 Dredging instrument used, Oyster dredge  
 Direction of drift, S. S. E. ; distance, 1/8 mile  
 Temperature of air, 74 therm. No.,  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, 1.0221 temp., 23 1/2  
 " at depth of fathoms, "  
 " at bottom, 1.0221 " 23 1/2  
 Number of salinometer, 7450  
 Barometer reading, 30.01  
 State of sky, Clear  
 Direction of wind, N. N. W. ; force, 4  
 Rain,  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, Fish Hawk  
 Service to which attached, Fish Commission  
 Name and rank of commanding officer, James A. Smith  
 Boatswain U. S. N.  
 Name and position of observer, Vernon E. West

NOTES RELATING TO STATION NO. 7357

Good sponge ground.  
Logger-head sponges  
Cap. sponges  
ascidians  
grass  
small fish  
small crabs  
shells  
star fish



## RECORD OF DREDGING,

## TEMPERATURE AND DENSITY.

Station No. 7352

Date, Dec. 17, 1902

Time of day, 1:50 ; of tide, Flood

Locality, Off Cape Sable, Fla.

Exact position, Lat.  $25^{\circ}9'52''$ Long.  $81^{\circ}21'53''$ Depth,  $3\frac{3}{4}$  fathoms.

Nature of bottom, Grey sand &amp; shells

Dredging instrument used, Oyster dredge

Direction of drift, S. S. E. ; distance,  $\frac{1}{4}$  mile

Temperature of air, 74 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0230 temp., 23

" at depth of fathoms, "

" at bottom, 1.0230 "  $23\frac{1}{2}$ 

Number of salinometer, 7450

Barometer reading, 30.01

State of sky, Clear

Direction of wind, N. N. W. ; force, 4

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, James A. Smith

Boatman, U. S. N.

Name and position of observer,

Vernon E. West.



NOTES RELATING TO STATION NO. 7352

Several pieces of branch coral  
shells

acidium  $\Delta$

small crabs

small fish

worms

beetle.

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7353

Date, Dec. 17, 1902

Time of day, 2.24 ; of tide, Flood

Locality, Off Cape Sable, Fla.

Exact position, Lat. 25° 10' 00"

Long. 81° 25' 10"

Depth, 4 1/4 fathoms

Nature of bottom, Light grey sand &amp; broken shells

Dredging instrument used, Oyster dredge

Direction of drift, S ; distance, 1/2 mile

Temperature of air, 74 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0231 temp., 23

" at depth of fathoms, "

" at bottom, 1.0232 " 23 1/2

Number of salinometer, 7450

Barometer reading, 29.99

State of sky, Partly cloudy

Direction of wind, N.W. ; force, 4

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, James A. Smith

Boatswain U. S. N.

Name and position of observer,

Vernon C. West

NOTES RELATING TO STATION NO. 7353

Area shown

shells

smaller grains

and the fish

and small pieces of

grains

to top of

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7354

Date, Dec. 17, 1902

Time of day, 2:55 : of tide, Flood

Locality, Off Cape Sable, Fla.

Exact position, Lat. 25° 10' 10"

Long. 81° 28' 30"

Depth, 4 3/4 fathoms

Nature of bottom, Light gray sand &amp; shells

Dredging instrument used, Oyster dredge

Direction of drift, S. ; distance, 1/2 mile

Temperature of air, 73 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0237 temp., 23

" at depth of fathoms, "

" at bottom, 1.0239 " 23 1/2

Number of salinometer, 7450

Barometer reading, 29.99

State of sky, Partly cloudy

Direction of wind, N.W. ; force, 4

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, James A. Smith

Boatman, U. S. N.

Name and position of observer,

Vernon Ashbridge West

NOTES RELATING TO STATION NO. 7358

Aluminum  
smaller by 100  
smaller by 100  
1 large round hollow  
1 large air reaction  
quantity of small white  
several pieces of branch  
coral

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7353  
 Date, Dec. 18, 1902  
 Time of day, 9:15 ; of tide, Ebb  
 Locality, Off Cape Hable, Fla.  
 Exact position, 2 1/2 miles west & south  
 of Middle Cape, on ground  
 Depth, 9 1/2 fathoms  
 Nature of bottom, light green mud  
 Dredging instrument used, Trawl  
 Direction of drift, S. E. ; distance, 1/2 mile  
 Temperature of air, 63 therm. No.,  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, 1.0222 temp., 22  
 " at depth of fathoms, "  
 " at bottom, "  
 Number of salinometer, 7450  
 Barometer reading, 29.98  
 State of sky, clear  
 Direction of wind, North ; force, 4  
 Rain,  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, Fish Hawk  
 Service to which attached, Fish Commission  
 Name and rank of commanding officer, J. W. B. Boster  
 U. S. N.  
 Name and position of observer, Vernon E. West.

NOTES RELATING TO STATION NO. 2254

all crabs

Three species of starfish

several worms

Two species of fish

1 Hermit crab



# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7356  
 Date, Dec 18, 1902  
 Time of day, 9:50 ; of tide, ebb  
 Locality, off Cape Cod  
 Exact position, Lat. 25° 06' 30"  
Long. 71° 12' 25"  
 Depth, 1 1/2 fathoms  
 Nature of bottom, no chy  
 Dredging instrument used, in situ  
 Direction of drift, S. W. ; distance, 1/2 mile  
 Temperature of air, 65 therm. No.,  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, 1.0229 temp., 22  
 " at depth of fathoms, "  
 " at bottom, "  
 Number of salinometer, 7450  
 Barometer reading, 29.72  
 State of sky, clear  
 Direction of wind, W. by N. ; force, 2  
 Rain,  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, Fish Hawk  
 Service to which attached, Fish Commission  
 Name and rank of commanding officer, Boatman U. S. N.  
 Name and position of observer, Vernon E. West

NOTES RELATING TO STATION NO. 7228

all vines  
small fruit  
small bracts  
grass  
leaves  
star fruit  
small leaved shrub of open  
vines  
o. leaves  
holo thinnaria

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7357  
 Date, Dec 12, 1902  
 Time of day, 10:25 ; of tide, ebb  
 Locality, Off Cape Sable, Fla  
 Exact position, Lat. 25° 06' 32"  
 Long. 81° 15' 50"  
 Depth, 2 3/4 fathoms  
 Nature of bottom, light gy. sand & broken shells  
 Dredging instrument used, Oyster dredge  
 Direction of drift, S. ; distance, 1/2 mile  
 Temperature of air, 65 therm. No.,  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, 1.0232 temp., 22.5  
 " at depth of fathoms, "  
 " at bottom, "  
 Number of salinometer, 7450  
 Barometer reading, 29.78  
 State of sky, Clear  
 Direction of wind, North ; force, 4  
 Rain,  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, Fish Hawk  
 Service to which attached, Fish Commis.  
 Name and rank of commanding officer, James A. Smith  
 Boatman  
 Name and position of observer, Vernon E. West

NOTES RELATING TO STATION NO. 7337

Station first  
down at an all hills &  
beaut. water  
in fine stream

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7358

Date, Dec. 14, 1902

Time of day, 10:55; of tide, low

Locality, Off Cape Sable, Fla.

Exact position, Lat. 25° 06' 45"

Long. 81° 19' 07"

Depth, 2 fathoms

Nature of bottom, Light grey sand broken shells

Dredging instrument used, Dredge

Direction of drift, South; distance, 4 miles

Temperature of air, 67 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0228 temp., 22.5

" at depth of fathoms, "

" at bottom, 1.0226 " 22.5

Number of salinometer, 7450

Barometer reading, 29.97

State of sky, Clear

Direction of wind, N. N. E; force, 3

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer,

Boatwain, U. S. N.

Name and position of observer,

Vernon C. West

NOTES RELATING TO STATION NO. 7358

200 clams  
small crabs  
small fish  
4 shrimp

## RECORD OF DREDGING,

## TEMPERATURE AND DENSITY.

Station No. *7357*  
 Date, *Dec. 18, 1902*  
 Time of day, *11:27* ; of tide, *ebb*  
 Locality, *Off Cape Sable, Fla.*  
 Exact position, *Lat. 25° 06' 52"*  
*Long. 81° 22' 25"*  
 Depth, *4 1/2 fathoms*  
 Nature of bottom, *Light gray sand & broken shells*  
 Dredging instrument used, *Dredge*  
 Direction of drift, *S. E.* ; distance, *1/2 mile*  
 Temperature of air, *67* therm. No.,  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, *1.0229* temp., *22.5*  
 " at depth of fathoms, "  
 " at bottom, *1.0227* " *23*  
 Number of salinometer, *7450*  
 Barometer reading, *29.97*  
 State of sky, *Clear*  
 Direction of wind, *N. N. E.* ; force, *3*  
 Rain,  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, *Fish Hawk*  
 Service to which attached, *Fish Commission*  
 Name and rank of commanding officer, *James A. Smith*  
*Boatsman U. S. N.*  
 Name and position of observer,  
*Vernon E. West.*



NOTES RELATING TO STATION NO. 73018

small pieces  
several pieces of rough wood  
& shrimp

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7360

Date, Dec. 18, 1912

Time of day, 12:00 P.M. of tide.  $\frac{1}{4}$  flood

Locality, Off Cape Hatteras, N. C.

Exact position, Lat.  $25^{\circ}07'35''$

Long.  $75^{\circ}25'00''$

Depth, 4 1/2 fathoms

Nature of bottom, Dry sand & grass

Dredging instrument used, Oyster dredge

Direction of drift, S. S. E. ; distance,  $\frac{1}{8}$  mile

Temperature of air, 67 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0231 temp., 22.5

" at depth of fathoms, "

" at bottom, 1.0230 " 23

Number of salinometer, 7450

Barometer reading, 29.96

State of sky, clear

Direction of wind, N. N. E. ; force, 3

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, U. S. Fish Commission

Name and rank of commanding officer, James B. Smith

Boatswain, U. S. N.

Name and position of observer,

Vernon E. West.

NOTES RELATING TO STATION NO. 7364

Many small snails  
in fine small fish  
1 large green crab  
1 large hard sponge  
Several mudhorts  
1 sand dollar

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7361*  
 Date, *Dec. 18, 1902*  
 Time of day, *12:30 P.M.*; of tide, *1/4 flood*  
 Locality, *Off Cape Hable*  
 Exact position, *Lat. 25° 22' 10"*  
*Long. 21° 29' 00"*  
 Depth, *5 fathoms*  
 Nature of bottom, *rocky coral*  
 Dredging instrument used, *Hydraulic dredge*  
 Direction of drift, *S.W.*; distance, *1/4 mile*  
 Temperature of air, *67* therm. No.,  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, *1.0242* temp., *22*  
 " at depth of fathoms, "  
 " at bottom, *1.0236* " *23*  
 Number of salinometer, *7450*  
 Barometer reading, *29.93*  
 State of sky, *Clear*  
 Direction of wind, *N.N.E.*; force, *3*  
 Rain,  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, *Fish Hawk*  
 Service to which attached, *Fish Commission*  
 Name and rank of commanding officer, *James A. Smith*  
*Boatsman U.S.N.*  
 Name and position of observer,  
*Wm. E. Threlkeld*

NOTES RELATING TO STATION NO. 736-1

Several glove & loggers traps  
Many species of small crabs  
grass

Small species of small fish  
A few pieces of coral  
Starfish

sea urchins

squilla

1 sand dollar

## RECORD OF DREDGING.

## TEMPERATURE AND DENSITY.

Station No. *7362*  
 Date, *Dec. 18, 1902*  
 Time of day, *1.00 P.M.*; of tide, *1/2 flood*  
 Locality, *Off Cape Sable, Fla.*  
 Exact position, *Lat. 25° 04' 15"*  
*Long. 81° 29' 15"*  
 Depth, *4 3/4 fathoms*  
 Nature of bottom, *rocky*  
 Dredging instrument used, *Agate dredge*  
 Direction of drift, *S.W.*; distance, *1/4 mile*  
 Temperature of air, *69* therm. No.,  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, *1.0236* temp., *22.5*  
 " at depth of fathoms, "  
 " at bottom, *1.0238* " *22.5*  
 Number of salinometer, *7750*  
 Barometer reading, *29.93*  
 State of sky, *Clear*  
 Direction of wind, *N. N. E.*; force, *3*  
 Rain,  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, *Fish Hawk*  
 Service to which attached, *Fish Commission*  
 Name and rank of commanding officer, *James A. Smith*  
*Boatswain U.S.N.*  
 Name and position of observer,  
*Vernon E. West,*

NOTES RELATING TO STATION NO. 7342

2 bat fish

1 large sea urchin

1 small dollar

1 small sea horse

several pieces of coral  
grass

several fish

a few star fish

several small crabs

etc.



## RECORD OF DREDGING.

## TEMPERATURE AND DENSITY.

Station No., 7363

Date, Dec. 18 1902

Time of day, 1:30 P.M.; of tide,  $\frac{1}{2}$  flood

Locality, Off Cape Hatteras, N.C.

Exact position, Lat.  $25^{\circ}04'55''$ Long.  $81^{\circ}24'55''$ Depth,  $3\frac{1}{2}$  fathoms

Nature of bottom, rocky sand

Dredging instrument used, Oyster dredge

Direction of drift, N. ; distance,  $\frac{1}{4}$  mile

Temperature of air, 69 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0231 temp., 22

" at depth of fathoms, "

" at bottom, 1.0235 " 22.5

Number of salinometer, 7451

Barometer reading, 29.92

State of sky, Clear

Direction of wind, N.N.E.; force, 3

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, James C. Smith

Boatswain U.S.N.

Name and position of observer,

Vernon E. West.

NOTES RELATING TO STATION NO. 7563

red drums

local

small fish

small crabs

several sand dollars

1 large and several small *Callinectes*

1 basket star fish

grass

6 quantity of shells

2 large sponges

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7364

Date, Dec. 18, 1902

Time of day, 2 P.M. ; of tide, 4 fms. ebb

Locality, Off Cape Sable, Fla.

Exact position, Lat.  $25^{\circ} 03' 10''$

Long.  $81^{\circ} 24' 30''$

Depth, 34 fathoms

Nature of bottom, Grey sand & shells.

Dredging instrument used, Oyster dredge

Direction of drift, West ; distance, 4 miles

Temperature of air, 70 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0224 temp., 22.5

" at depth of fathoms, "

" at bottom, 1.0227 " 22.5

Number of salinometer, 7450

Barometer reading, 29.91

State of sky, Clear

Direction of wind, N. N. E. ; force, 3

Rain.

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, U. S. Commission

Name and rank of commanding officer, James A. Smith

Boatswain U. S. N.

Name and position of observer,

Vernon E. Hunt.

NOTES RELATING TO STATION NO. 7367

1. Logger head sponge  
1. cap sponge  
large spongia water  
several small crabs  
grass  
shells

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7355

Date, Dec. 19, 1912

Time of day, 2:32 P.M.; of tide,  $\frac{1}{2}$  flood

Locality, Off Cape Sable, Fla.

Exact position, Lat.  $25^{\circ}13'37''$ Long.  $81^{\circ}16'10''$ 

Depth, 4 fathoms

Nature of bottom, Hard sand &amp; shells

Dredging instrument used, Oyster dredge

Direction of drift, S.W.; distance,  $\frac{1}{4}$  mile

Temperature of air, 70 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0226 temp., 22.5

" at depth of fathoms, "

" at bottom, 1.0226 " 22.5

Number of salinometer, 7450

Barometer reading, 29.91

State of sky, Clear

Direction of wind, N.N.E.; force, 3

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Com. station

Name and rank of commanding officer, James A. Smith

Boatswain U.S.N.

Name and position of observer,

Vernon C. West.

NOTES RELATING TO STATION NO. 7865

2 fish  
2 species of crabs  
4 shrimp  
grass

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7266  
 Date, Dec. 12, 1912  
 Time of day, 3:15 P.M. of tide,  $\frac{3}{4}$  flood  
 Locality, Off Cape Sable, Fla.  
 Exact position, Lat.  $25^{\circ} 58' 30''$   
 Long.  $81^{\circ} 12' 10''$   
 Depth,  $2\frac{3}{4}$  fathoms  
 Nature of bottom,  
 Dredging instrument used, Agate dredge  
 Direction of drift, S.W.; distance, 2 miles  
 Temperature of air, 72 therm. No.,  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, 1.0230 temp., 22  
 " at depth of fathoms, "  
 " at bottom, "  
 Number of salinometer, 2450  
 Barometer reading, 29.91  
 State of sky, Partly cloudy  
 Direction of wind, N.N.E.; force, 4  
 Rain,  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, Fish Hawk  
 Service to which attached, Fish Commission  
 Name and rank of commanding officer, James A. Smith  
 Boatswain U.S.N.  
 Name and position of observer, Vernon C. West



NOTES RELATING TO STATION NO. 7000

4 small crabs

2 shrimps

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7367

Date, Dec. 18, 1902

Time of day, 3.43 P.M.; of tide,  $\frac{3}{4}$  flood

Locality, off Cape Sable, Fla.

Exact position, Lat.  $25^{\circ}03'15''$

Long.  $81^{\circ}18'36''$

Depth, 2  $\frac{1}{4}$  fathoms

Nature of bottom, no clay

Dredging instrument used, Oyster dredge

Direction of drift, S.W.; distance, 8 miles

Temperature of air, 76 therm. No.,

" of surface water, 1.0230 " 22

" at depth of fathoms, "

" at bottom, "

Density at surface, temp.,

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7750

Barometer reading, 29.91

State of sky, Partly cloudy

Direction of wind, N.N.E.; force, 4

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, James A. Smith

Boatswain, U.S.N.

Name and position of observer,

William C. West

NOTES RELATING TO STATION NO. 7261

264 spongers  
several longhorned spongers  
in stone flat  
several seen all fresh  
several seen all crabs

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7248

Date, Dec. 17, 1902

Time of day, 9:05 A.M.; of tide, Low

Locality, Off Cape Cod, Mass.

Exact position, N. S. W. 2 W. 7 1/2 miles from South Sandy.

Depth, 11 fathoms

Nature of bottom, Soft mud & grass

Dredging instrument used, Dredge

Direction of drift, N. W. ; distance, 1/2 mile

Temperature of air, 65 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0234 temp., 22

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7451

Barometer reading, 29.77

State of sky, Partly Cloudy

Direction of wind, S. W. E. ; force, 5

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, U. S. Fish Commission

Name and rank of commanding officer, James G. Smith  
Lieutenant U. S. N.

Name and position of observer, Vernon E. Hunt

NOTES RELATING TO STATION NO. 1168

— some of fish  
being small  
some small  
specimens of small fish  
in the stream

## RECORD OF DREDGING.

## TEMPERATURE AND DENSITY.

Station No. 7369  
 Date, Dec. 17, 1902  
 Time of day, 9.40 A.M. of tide, low  
 Locality, Off Cape Hatteras, N.C.  
 Exact position, Lat.  $25^{\circ} 20' 30''$   
 Long.  $81^{\circ} 12' 20''$   
 Depth, 11 1/2 fms.  
 Nature of bottom, rocky  
 Dredging instrument used, Dredge  
 Direction of drift, N. E. ; distance, 10 miles  
 Temperature of air, 62 therm. No.,  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, 1.0245 temp., 22  
 " at depth of fathoms, "  
 " at bottom, "  
 Number of salinometer, 1410  
 Barometer reading, 30.06  
 State of sky, Clear  
 Direction of wind, N. N. E. ; force, 4  
 Rain,  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, U.S.S. Albatross  
 Service to which attached, U.S. Commission  
 Name and rank of commanding officer, James E. Smith  
 Lieutenant U.S.N.  
 Name and position of observer, James E. Smith

NOTES RELATING TO STATION NO. 1347

covered up sponge  
approx. 1/2 inch thick  
lighter sponge  
fine white silk  
hues  
green  
in which  
very much better

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7370*  
 Date, *Dec. 19, 1902*  
 Time of day, *10:10 A.M.*; of tide, *Low*  
 Locality, *off Cape Sable, Fla.*  
 Exact position, *Lat. 25° 05' 40"*  
*Long. 81° 15' 37"*  
 Depth, *2 1/2 fathoms*  
 Nature of bottom, *rocky*  
 Dredging instrument used, *beam dredge*  
 Direction of drift, *East*; distance, *4 miles*  
 Temperature of air, *68* therm. No.,  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, *1.0240* temp., *22.5*  
 " at depth of fathoms, "  
 " at bottom, "  
 Number of salinometer, *7450*  
 Barometer reading, *30.01*  
 State of sky, *clear*  
 Direction of wind, *N. N. E.*; force, *4*  
 Rain,  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, *U. S. Fish Hawk*  
 Service to which attached, *U. S. Fish Commission*  
 Name and rank of commanding officer, *James A. Smith*  
*Ensign U. S. N.*  
 Name and position of observer, *James B. West*



NOTES RELATING TO STATION NO. 732a

A few soft sponges  
Several glass sponges  
Bryozoans along bottom  
A few small fish  
Several small crabs  
Several small pieces of branch coral  
A few shrimp  
Several worms  
Starfish

## RECORD OF DREDGING,

## TEMPERATURE AND DENSITY.

Station No. 7371

Date, Dec. 19, 1902

Time of day, 11:40 A.M.; of tide, low

Locality, Off Cape Hatteras, N.C.

Exact position, Lat. 25° 00' 45"

Long 81° 18' 55"

Depth, 3 1/2 fathoms

Nature of bottom, fine sand &amp; shells

Dredging instrument used, Dredge

Direction of drift, N. E.; distance, 1/2 mile

Temperature of air, 67 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0239 temp., 22.5

" at depth of fathoms, "

" at bottom, 1.0236 " 23

Number of salinometer, 7450

Barometer reading, 30.01

State of sky, Clear

Direction of wind, N. N. E.; force, 4

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, J. C. Smith

Ensign U. S. N.

Name and position of observer,

Vernon E. West.

NOTES RELATING TO STATION NO. 7221

3 species of mals

2 species of starfish

Several sea urchins

Several species of brittle stars

## RECORD OF DREDGING.

## TEMPERATURE AND DENSITY.

Station No. 7372  
 Date, Dec. 17, 1902  
 Time of day, 11:10 A.M.; of tide, 1/4 flood  
 Locality, Off Cape Hatteras, N.C.  
 Exact position, Lat. 35° 20' 15" N.  
 Long. 75° 22' 15" W.  
 Depth, 4 fathoms  
 Nature of bottom, rocky  
 Dredging instrument used, Oyster dredge  
 Direction of drift, N. E.; distance, 1/4 mile  
 Temperature of air, 70 therm. No.,  
 " of surface water, ..  
 " at depth of fathoms, ..  
 " at bottom, ..  
 Density at surface, 1.0228 temp., 23  
 " at depth of fathoms, ..  
 " at bottom, 1.0226 .. 22  
 Number of salinometer, 7456  
 Barometer reading, 30.00  
 State of sky, Clear  
 Direction of wind, N. N. E.; force, 4  
 Rain,  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, Fish Hawk  
 Service to which attached, U.S. Fish Commission  
 Name and rank of commanding officer, Lieut. J. H. Smith  
 Name and position of observer, Vernon C. West

NOTES RELATING TO STATION NO. 7322

A few glove sponges  
blackish brown boggy black sponge  
1 small cup of sponge  
several species of small corals  
1 large 1 small with pieces coral  
1 small fish  
scleroderma  
very rich bottom

## RECORD OF DREDGING.

## TEMPERATURE AND DENSITY.

Station No. 7373  
 Date, Dec. 17, 1912  
 Time of day, 11:40 A.M.; of tide,  $\frac{1}{4}$  flood  
 Locality, off Cape Sable, Fla.  
 Exact position, Lat. 25° 01' 00"  
 Long. 81° 25' 30"  
 Depth,  $4\frac{1}{2}$  fathoms  
 Nature of bottom, fine sand & shells  
 Dredging instrument used, Oyster dredge  
 Direction of drift, N. E. ; distance, 1/2 mile  
 Temperature of air, 72 therm. No.,  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, 1.0228 temp., 22.5  
 " at depth of fathoms, "  
 " at bottom, 1.0226 " 23  
 Number of salinometer, 7450  
 Barometer reading, 29.99  
 State of sky, Clear  
 Direction of wind, N N E ; force, 4  
 Rain,  
 Direction of surface current, ; force,  
 " of bottom " : force,  
 Name of vessel, Fish Hawk  
 Service to which attached, Fish Commission  
 Name and rank of commanding officer, James C. Smith  
 Lieutenant, U.S.N.  
 Name and position of observer, Vernon E. Mearns

NOTES RELATING TO STATION NO. 7223

several species of small fish  
several species of crabs  
few shrimp  
few pieces of coral  
also sponges  
1 large fish  
2 species star fish

## RECORD OF DREDGING.

## TEMPERATURE AND DENSITY.

Station No. 7374

Date, Dec. 12, 1912

Time of day, 12:00 P. ; of tide, 4/5 flood

Locality, Off Cape Sabi, Fla.

Exact position, Lat. 25° 01' 10"

Long. 81° 27' 45"

Depth, 4 3/4 fathoms

Nature of bottom, rocky coral

Dredging instrument used, Dredge

Direction of drift, North : distance, 1/2 mile

Temperature of air, 72 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0234 temp., 22.5°

" at depth of fathoms, "

" at bottom, 1.0232 " 23

Number of salinometer, 7450

Barometer reading, 29.99

State of sky, Sun

Direction of wind, N. N. E., ; force, 4

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, James A. Smith

Boatsman U. S. N.

Name and position of observer,

Vernon C. Went.



NOTES RELATING TO STATION NO. 7378

all dunes

about 100 ft

several sea anemones

several of 2 spec. sponges

young crabs

large rock growth

## RECORD OF DREDGING.

## TEMPERATURE AND DENSITY.

Station No. 7375

Date, Dec. 19, 1912

Time of day, 12:30 P. M. of tide, 1/2 flood

Locality, off Cape Fear, N. C.

Exact position, Lat. 29° 38' 05"

Long. 81° 22' 30"

Depth, 5 fathoms

Nature of bottom, rocky

Dredging instrument used, Oyster dredge

Direction of drift, North; distance, 1/2 mile

Temperature of air, 72 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0232 temp., 22.5

" at depth of fathoms, "

" at bottom, 1.0232 " 22

Number of salinometer, 7450

Barometer reading, 29.99

State of sky, Clear

Direction of wind, N. N. E.; force, 4

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, James C. Smith

Boatswain U. S. N.

Name and position of observer,

Vernon C. West

NOTES RELATING TO STATION NO. 2372

Grass roots  
Several  
a few starfish  
1 octopus  
Several pieces of coral  
Several small fish

# RECORD OF DREDGING. TEMPERATURE AND DENSITY.

Station No. *7376*  
 Date, *Dec 19, 1902*  
 Time of day, *1:00 PM*; of tide, *2/4 flood*  
 Locality, *Off Cape Sable, Fla.*  
 Exact position, *Lat. 24° 58' 00"*  
*Long. 81° 24' 40"*  
 Depth, *4 3/4 fathoms*  
 Nature of bottom, *hard & broken shells*  
 Dredging instrument used, *Agate dredge*  
 Direction of drift, *West*; distance, *1/4 mile*  
 Temperature of air, *72* therm. No.,  
 " of surface water, " "  
 " at depth of fathoms, "  
 " at bottom, " "  
 Density at surface, *1.0232* temp., *22*  
 " at depth of fathoms, "  
 " at bottom, *1.0238* " *22*  
 Number of salinometer, *745*  
 Barometer reading, *29.95*  
 State of sky, *Clear*  
 Direction of wind, *N.W.*; force, *4*  
 Rain,  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, *Fish Hawk*  
 Service to which attached, *Fish Commission*  
 Name and rank of commanding officer, *James R. Smith*  
*Boatswain U. S. N.*  
 Name and position of observer,  
*Vernon E. West*

NOTES RELATING TO STATION NO. 7376

Nothing but dead shells

## RECORD OF DREDGING.

## TEMPERATURE AND DENSITY.

Station No. 7372  
 Date, Dec 19 1902  
 Time of day, 1:30 P.M.; of tide, 1/2 flood  
 Locality, off Cape Lookout, N.C.  
 Exact position, Lat. 34° 57' 50"  
 Long. 76° 24' 50"  
 Depth, 34 fathoms  
 Nature of bottom, Hard sand & grass  
 Dredging instrument used, Oyster dredge  
 Direction of drift, N.W. : distance, 1/2 mile  
 Temperature of air, 72 therm. No.,  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, 1.0242 temp., 22  
 " at depth of fathoms, "  
 " at bottom, 1.0234 " 22  
 Number of salinometer, 1151  
 Barometer reading, 29.95  
 State of sky, Partly cloudy  
 Direction of wind, N.N.W.; force, 4  
 Rain,  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, Fish Hawk  
 Service to which attached, Fish Commission  
 Name and rank of commanding officer, Boatswain U.S.N.  
 Name and position of observer, Vernon E. Went

NOTES RELATING TO STATION NO. 252

2 on all side of the  
stream considerable water  
for some  
has been the biggest head of water

## RECORD OF DREDGING.

## TEMPERATURE AND DENSITY.

Station No. 7378

Date, Dec. 19, 1912

Time of day, 2:03 P.M.; of tide, 2/3 flood

Locality, Off Cape Hatteras, N.C.

Exact position, Lat. 35° 57' 42"

Long. 75° 12' 10"

Depth, 3 1/2 fathoms

Nature of bottom, brk. sand &amp; grass

Dredging instrument used, Dredge

Direction of drift, N.W.; distance, 1/4 mile

Temperature of air, 72 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0237 temp., 21.5

" at depth of fathoms, "

" at bottom, 1.0245 " 22

Number of salinometer, 7450

Barometer reading, 29.95

State of sky, Clear

Direction of wind, N.W.; force, 4

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, James G. Smith

Boatsman, U.S.N.

Name and position of observer,

Vernon C. Wright



NOTES RELATING TO STATION NO. 7278

Low bogged land top of page  
1 blue fish  
1 pink fish  
1 sea robin  
among small rocks  
in rocks  
around hollow

## RECORD OF DREDGING.

## TEMPERATURE AND DENSITY.

Station No. 7379

Date, Dec. 12, 1912

Time of day, 2:42 P.M. of tide, 3/4 flood

Locality, Off Cape Sable, Fla.

Exact position, Lat. 28° 51' 35"

Long. 81° 13' 25"

Depth, 34 fathoms

Nature of bottom, Sand &amp; grass

Dredging instrument used, Oyster dredge

Direction of drift, West; distance, 1/2 mile

Temperature of air, 72 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0248 temp., 22

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 29.95

State of sky, Clear

Direction of wind, N. N. W.; force, 4

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, James R. Smith

Bourne, U. S. N.

Name and position of observer,

Kearney E. Hunt.

NOTES RELATING TO STATION NO. 2279

Several large logs  
found in all parts  
of the area.

## RECORD OF DREDGING.

## TEMPERATURE AND DENSITY.

Station No. 7380  
 Date, Dec. 19, 1902  
 Time of day, 3:43 P.M.; of tide, 3/4 flood  
 Locality, Off Cape Cod, 2 1/2 mi.  
 Exact position, Lat. 24° 52' 25" N  
 Long. 71° 03' 30" W  
 Depth, 24 fathoms  
 Nature of bottom, Grey sand & green mud  
 Dredging instrument used, Cope & Dodge dredge  
 Direction of drift, N. by E. : distance, 1/2 mile  
 Temperature of air, 71 therm. No.,  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, 1.0242 temp., 21.5  
 " at depth of fathoms, "  
 " at bottom, "  
 Number of salinometer, 745  
 Barometer reading, 29.94  
 State of sky, Clear  
 Direction of wind, N. N. W. ; force, 7  
 Rain,  
 Direction of surface current, : force,  
 " of bottom " : force.  
 Name of vessel, Fish Hawk  
 Service to which attached, Fish Commission  
 Name and rank of commanding officer, James A. Smith  
 Lieutenant U. S. N.  
 Name and position of observer, Herman C. Pratt

NOTES RELATING TO STATION NO. 7180

2 am gill fish taken  
from by gillnet of 100 ft  
from shore at low tide

## RECORD OF DREDGING.

## TEMPERATURE AND DENSITY.

Station No. *7381*  
 Date, *Dec. 12, 1912*  
 Time of day, *4:16 P.M.*; of tide, *3/4 flood*  
 Locality, *off Cape Sable, Fla*  
 Exact position, *Lat. 26°57'30"*  
*Long. 80°50'35"*  
 Depth, *2 1/4 fathoms*  
 Nature of bottom, *Sand & shells*  
 Dredging instrument used, *Oyster dredge*  
 Direction of drift, *N. by E.*; distance, *2 miles*  
 Temperature of air, *77* therm. No.,  
 " of surface water, " "  
 " at depth of fathoms, " "  
 " at bottom, " "  
 Density at surface, *1.0234* temp., *21.5*  
 " at depth of fathoms, " "  
 " at bottom, " "  
 Number of salinometer, *1758*  
 Barometer reading, *29.94*  
 State of sky, *Clear*  
 Direction of wind, *N. N. W.*; force, *4*  
 Rain,  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, *U.S.S. Hawk*  
 Service to which attached, *U.S. Commission*  
 Name and rank of commanding officer, *J. C. Smith*  
*Boatswain, U.S.N.*  
 Name and position of observer,  
*Vernon C. West.*

NOTES RELATING TO STATION NO. 232

several large head sponges  
a few other fish  
a few fish

## RECORD OF DREDGING.

## TEMPERATURE AND DENSITY.

Station No. 2212

Date, June 20, 1902

Time of day, 6:30 A.M.; of tide, high

Locality, Off Cape Hatteras, N.C.

Exact position, Lat. 34° 54' 20"

Long. 75° 48' 00"

Depth, 2 fathoms

Nature of bottom, rocky

Dredging instrument used, Oyster dredge

Direction of drift, N. E. ; distance, 1/2 mile

Temperature of air, 72 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0247 temp., 72

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 250

Barometer reading, 29.94

State of sky, Partly clear

Direction of wind, E. N. E. ; force, 2

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, James L. Smith

Rank, Lieutenant Junior Grade, U.S.N.

Name and position of observer,

Lester L. Smith



NOTES RELATING TO STATION NO. 7222

Heavy boggy land; 1 spec. in  
mud at base of a grass  
bank with fern & other  
in boggy place  
on stream  
grasses  
Heavy water bottom.

## RECORD OF DREDGING.

## TEMPERATURE AND DENSITY.

Station No. 7355

Date, Aug 27, 1882

Time of day, 7:30 A.M.; of tide, High

Locality, Off Cape Cod, N.E.

Exact position, Lat.  $24^{\circ} 54' 27''$ Long.  $71^{\circ} 11'$ 

Depth, 20 fms

Nature of bottom, rocky

Dredging instrument used, Dredge

Direction of drift, N.E.; distance, 1/2 mile

Temperature of air, 72 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.022 temp., 21.5

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7355

Barometer reading, 29.99

State of sky, Partly clear

Direction of wind, S.W.; force, 4

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, J. M. Smith, Lieut.

Lieut. J. M. Smith

Name and position of observer,

H. M. Smith

NOTES RELATING TO STATION NO. 5222

Dec. 14, 1904  
- 100 ft. deep  
- 100 ft. deep  
- 100 ft. deep  
- 100 ft. deep  
- 100 ft. deep

## RECORD OF DREDGING.

## TEMPERATURE AND DENSITY.

Station No. *7584*  
 Date, *Dec. 20, 1902*  
 Time of day, *7:20 A.M.*; of tide, *low*  
 Locality, *Off Cape Sable, Fla.*  
 Exact position, *Lat. 24° 54' 30"*  
*Long. 81° 15' 35"*  
 Depth, *2 1/2 fathoms*  
 Nature of bottom, *rocky*  
 Dredging instrument used, *Hydraulic dredge*  
 Direction of drift, *West*; distance, *1/4 mile*  
 Temperature of air, *73* therm. No.,  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, *1.0240* temp., *21.5*  
 " at depth of fathoms, "  
 " at bottom, "  
 Number of salinometer, *7559*  
 Barometer reading, *30.1*  
 State of sky, *Partly clear*  
 Direction of wind, *SE*; force, *2*  
 Rain,  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, *U.S.S. Fish Hawk*  
 Service to which attached, *U.S. Fish Commission*  
 Name and rank of commanding officer, *James W. Smith*  
*Comdr. U.S.N.*  
 Name and position of observer, *Robert H. Wood*

NOTES RELATING TO STATION NO. 7112

Two bottles of a green spray  
to find small ticks  
on the feet  
on the feet  
on the feet  
on the feet  
on the feet  
on the feet

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7205

Date, March 10

Time of day, 1:30 P.M.; of tide, 1/4 ebb

Locality, off Cape Cod

Exact position, Lat. 24° 15'

Long. 70° 15' 30"

Depth, 2 1/4 fms

Nature of bottom, rocky

Dredging instrument used, dredge

Direction of drift, S. by E.; distance, 1/2 mile

Temperature of air, 60 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0272 temp., 26.5

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7200

Barometer reading, 30.5

State of sky, Partly clear

Direction of wind, S.W. by E.; force, 2

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, U.S. Fish Commission

Name and rank of commanding officer,

B. F. Smith, U.S.N.

Name and position of observer,

Vernon C. West

NOTES RELATING TO STATION NO. 2125

Low soft sponges

as follows

many small patches

of small sponges

very little bottom

## RECORD OF DREDGING.

## TEMPERATURE AND DENSITY.

Station No. *2321*  
 Date, *Aug. 20, 1882*  
 Time of day, *10:15*; of tide, *2*  
 Locality, *off Cape Cod*  
 Exact position, *Lat. 24° 54' 48"*  
*Long. 70° 20' 25"*  
 Depth, *274*  
 Nature of bottom, *Hard sand & gravel*  
 Dredging instrument used, *Hydrographic dredge*  
 Direction of drift, *E. N. E.*; distance, *1/2 mile*  
 Temperature of air, *74* therm. No.,  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, *1.0244* temp., *22*  
 " at depth of fathoms, "  
 " at bottom, "  
 Number of salinometer, *743*  
 Barometer reading, *29.97*  
 State of sky, *B, C, S*  
 Direction of wind, *E. N. E.*; force, *2*  
 Rain,  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, *U. S. Fish Com. Fish Hawk*  
 Service to which attached, *U. S. Fish Commission*  
 Name and rank of commanding officer, *James W. Smith*  
*Ensign U. S. N.*  
 Name and position of observer, *E. W. Mott*



NOTES RELATING TO STATION NO. 714

1. 1/2 ft. deep  
2. 1/2 ft. deep  
3. 1/2 ft. deep  
4. 1/2 ft. deep

## RECORD OF DREDGING.

## TEMPERATURE AND DENSITY.

Station No. 7345  
 Date, Dec 22, 1911  
 Time of day, 9:00 A.M.; of tide, H. ebb  
 Locality, Off Cape Cod  
 Exact position, Lat.  $24^{\circ} 54' 51''$   
 Long.  $73^{\circ} 23' 45''$   
 Depth, 2 fathoms  
 Nature of bottom, Green mud  
 Dredging instrument used, Dredge  
 Direction of drift, N. E. ; distance, 4 miles  
 Temperature of air, 74 therm. No.,  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, 1.0244 temp., 22  
 " at depth of fathoms, "  
 " at bottom, 1.0209 " 22.5  
 Number of salinometer, 740  
 Barometer reading, 29.85  
 State of sky, Partly clear  
 Direction of wind, S. E. ; force, 2  
 Rain,  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, U.S.S. Albatross  
 Service to which attached, U.S. Fish Commission  
 Name and rank of commanding officer, Z. Tanner, Lt. Comdr.  
 Name and position of observer,

NOTES RELATING TO STATION NO. 3483

2 large stringer  
2 white fish  
2 small fish  
2 small fish  
found the small fish

## RECORD OF DREDGING.

## TEMPERATURE AND DENSITY.

Station No. 7078

Date, Dec. 21, 1912

Time of day, 9:30 A.M.; of tide, ebb

Locality, Cape Cod Bay, Mass.

Exact position, Lat. 41° 55' 00"

Long. 71° 22' 00"

Depth, 4 fathoms

Nature of bottom, rocky

Dredging instrument used, dredge

Direction of drift, East; distance, 1/2 mile

Temperature of air, 75 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0240 temp., 22.5

" at depth of fathoms, "

" at bottom, 1.0236 " 22.5

Number of salinometer, 2112

Barometer reading, 29.8

State of sky, Partly clear

Direction of wind, E. N. E.; force, 2

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, James A. Smith

Boatsman, U. S. N.

Name and position of observer,

Vernon C. West.

NOTES RELATING TO STATION NO. 7128

A few starfish  
Several sea urchins  
A few small shells  
A few small fish  
A few small crabs  
A few small shrimp

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7389  
 Date, Dec 21, 1902  
 Time of day, 7:50 ; of tide,  $\frac{1}{2}$  ebb  
 Locality, Off Cape Hatteras, N.C.  
 Exact position, Lat.  $34^{\circ}55'10''$   
 Long.  $75^{\circ}30'20''$   
 Depth, 5 fathoms  
 Nature of bottom, rocky  
 Dredging instrument used, Dredge  
 Direction of drift, E. N. E. ; distance,  $\frac{1}{2}$  mile  
 Temperature of air, 75 therm. No.,  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, 1.0240 temp., 22.5  
 " at depth of fathoms, "  
 " at bottom, 1.0238 " 22.5  
 Number of salinometer, 7450  
 Barometer reading, 29.7  
 State of sky, Partly cloudy  
 Direction of wind, S. E. ; force, 2  
 Rain,  
 Direction of surface current, ; force,  
 " of bottom " : force.  
 Name of vessel, Fish Hawk  
 Service to which attached, Fish Commission  
 Name and rank of commanding officer, James H. Smith  
 Name and position of observer, V. B. Wright

NOTES RELATING TO STATION NO. 1237

A few small fish taken  
1. Hopperhead of the  
same size as the one taken at station  
1237. Quantity of larvae

# RECORD OF DREDGING.

## TEMPERATURE AND DENSITY.

Station No. *7390*  
 Date, *Dec. 22, 1902*  
 Time of day, *11:27 A.M.*; of tide, *1/2 ebb*  
 Locality, *off Cape Sable*  
 Exact position, *East end of Long Key*  
*bearing S. 74 W. distance 2 1/2 miles*  
 Depth, *10 fathoms*  
 Nature of bottom, *rocky*  
 Dredging instrument used, *Hydra dredge*  
 Direction of drift, *West*; distance, *1/4 mile*  
 Temperature of air, *75* therm. No.,  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, *1.0247* temp., *22*  
 " at depth of fathoms, "  
 " at bottom, *1.0242* " *22.5*  
 Number of salinometer, *1000*  
 Barometer reading, *30.02*  
 State of sky, *b, c, s*  
 Direction of wind, *W. S. W.*; force, *3*  
 Rain,  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, *U.S.S. Albatross*  
 Service to which attached, *U.S. Fish Commission*  
 Name and rank of commanding officer,  
 Name and position of observer,



NOTES RELATING TO STATION NO.

Very fine specimen of  
the same  
found in the  
same place  
as the one  
found in the  
same place

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 722.

Date, *June 11, 1881*

Time of day, *11:00 A. M.*; of tide, *1/2 ebb*

Locality, *off Cape Cod*

Exact position, *W. end of Content Key*

*bearing S. E. distance 2 1/2 miles*

Depth, *4 3/4 fathoms*

Nature of bottom, *fine sand & gy. m.*

Dredging instrument used, *Agassiz dredge*

Direction of drift, *West*; distance, *1/4 mile*

Temperature of air, *73* therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, *1.0246* temp. *22.5*

" at depth of fathoms, "

" at bottom, *1.0241* *22.5*

Number of salinometer, *51*

Barometer reading, *29.81*

State of sky, *b. c.*

Direction of wind, *N. N. E.*; force, *2*

Rain,

Direction of surface current, ; force,

" of bottom " : force,

Name of vessel, *U. S. Fish Hawk*

Service to which attached, *U. S. Fish Commission*

Name and rank of commanding officer, *James Bond, Lt. Comdr.*

*Department, U. S. N.*

Name and position of observer,

*William C. West*

NOTES RELATING TO STATION NO. 725.

Found on the surface of  
the road a few small  
white shells of a  
small size.

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No.

Date, Dec. 22, 1882

Time of day, 11:30 A. M.; of tide, 2, ebb.

Locality, Off Cape Cod, 7 mi.

Exact position, Lat. 29° 00' N.

Long. 71° 31' W.

Depth, 5 fathoms

Nature of bottom, rocky

Dredging instrument used, Dredge

Direction of drift, S. W.; distance, 4 miles

Temperature of air, 73 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0241 temp., 22.5

" at depth of fathoms, "

" at bottom, 1.0240 " 22.5

Number of salinometer,

Barometer reading, 29.71

State of sky,

Direction of wind, N. W. E.; force, 3

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, U. S. Fish Commission

Name and rank of commanding officer, James O. Smith, Lt.

Dredge No. 3

Name and position of observer,

Vernon C. West.

NOTES RELATING TO STATION NO. 2521

very small and if much of 2000  
about 1000  
to 1000 with fine  
brownish green of 2000  
very dense  
mature shrub  
abundant in  
the forest  
about 1000

## RECORD OF DREDGING.

## TEMPERATURE AND DENSITY.

Station No. 7012

Date, Dec. 22, 1900

Time of day, 12:30 P.; of tide,  $\frac{3}{4}$  ebb

Locality, off Cape Cod Light

Exact position, Lat.  $24^{\circ}53'21''$ Long.  $71^{\circ}27'07''$ Depth,  $3\frac{1}{4}$  fathoms

Nature of bottom, Hard sand &amp; mud

Dredging instrument used, Dredge

Direction of drift, West; distance,  $\frac{1}{4}$  mile

Temperature of air, 73 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0241 temp., 22

" at depth of fathoms, "

" at bottom, 1.0240 " 22

Number of salinometer, 750

Barometer reading, 30.1

State of sky, Clear

Direction of wind, N. N. E.; force, 2

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, U. S. Fish Com.

Service to which attached, U. S. Fish Com.

Name and rank of commanding officer, Lieut. Comdr. J. H. ...

Name and position of observer,

Vernon C. Wentt

NOTES RELATING TO STATION NO. 1232

Ground surface elevation 100.00

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7344

Date, Dec. 22, 1902

Time of day, 12:33 P.M.; of tide,  $\frac{3}{4}$  ebb.

Locality, Off Cape Sable, Fla.

Exact position, Lat.  $24^{\circ}51'52''$

Long.  $81^{\circ}23'50''$

Depth, 2 fathoms

Nature of bottom, Sand & grass

Dredging instrument used, Oyster dredge

Direction of drift, S. W. ; distance,  $\frac{1}{2}$  mile.

Temperature of air, 73 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0242 temp., 22

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450.

Barometer reading, 29.89

State of sky, Clear

Direction of wind, N. N. E. ; force, 3

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, James A. Smith

Boatsman, U. S. N.

Name and position of observer,

Vernon E. West.



NOTES RELATING TO STATION NO. 7394

1 file fish

1 pipe fish

Several crabs.

1 sea-urchin.

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7395

Date, Dec. 22, 1902

Time of day, 1:03 P. M.; of tide, low

Locality, Off Cape Sable

Exact position, Lat. 24° 51' 45"

Long. 81° 02' 52"

Depth, 2 fathoms

Nature of bottom, rocky

Dredging instrument used, Agster dredge

Direction of drift, West; distance, 1/4 mile

Temperature of air, 73 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0244 temp., 22

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 29.97

State of sky, Clear

Direction of wind, N. N. E.; force, 3

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Commission

Service to which attached, Fish Commission

Name and rank of commanding officer, James H. Smith

Boatswain, U. S. N.

Name and position of observer,

Vernon E. Miest

NOTES RELATING TO STATION NO. 7395

Several file fish

1 grouper

a i dinner

Several small crabs

Few small pieces of coral

1 loggerhead sponge

Several cap sponges

A few shrimp